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NEWS 32 Nov 25 More calculated properties added to REGISTRY
NEWS 33 Dec 02 TIBKAT will be removed from STN
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NEWS 35 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 36 Dec 17 TOXCENTER enhanced with additional content
NEWS 37 Dec 17 Adis Clinical Trials Insight now available on STN
NEWS 38 Dec 30 ISMEC no longer available
NEWS 39 Jan 13 Indexing added to some pre-1967 records in CA/CAPLUS

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CURRENT MACINTOSH VERSION IS V6 0b(ENG) AND V6 0Jb(JP)

AND CURRENT DISCOVER FILE IS DATED 01

OCTOBER 2002

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=> s parkin or parkin2
L1 822 PARKIN OR PARKIN2

=> s l1 and (transgen? or knockout or knock out or delet? or deficient?)
L2 172 L1 AND (TRANSGEN? OR KNOCK OUT OR KNOCK OUT OR DELET? OR DEFICIENT?)
L3 172 L1 AND (TRANSGEN? OR KNOCK OUT OR KNOCK OUT OR DELET? OR DEFICIENT?)

=> s parkin2
L3 172 L1 AND (TRANSGEN? OR KNOCK OUT OR KNOCK OUT OR DELET? OR DEFICIENT?)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 1 ANSWERS -
CONTINUE? Y/(N) y

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS
AN 2001 167694 CAPLUS
CN 134 203465
T Mouse ***parkin2*** cDNA and protein sequences for a transgenic animal model of Parkinson's and neurodegenerative diseases
FI Lubbert, Hermann
PA Bofrontera Pharmaceuticals GmbH, Germany
SO Eur. Pat. Appl. 62 pp.
CODEN EPXXDW
CIT Patent
LA English
FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1081225	A1	20010307	EP 1999-116766	
9990830				
R AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, L, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO				
WO 2001016176	A2	20010308	WO 2000-EP8071	
20000818				
WO 2001016176	A3	20010927		
W CA, JP, US				
RW AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				
PT, SE				
EP 1208200	A2	20020529	EP 2000-956461	
20000818				
R AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, L, LU, NL, SE, MC, PT,				
E, FI, CY				
PRAI EP 1999-116766	A	19990830		
WO 2000-EP8071	W	20000818		
AB This patent application claims mouse gene mPark2 (***parkin2***)				
nucleotide and protein sequences with mutations or deletions which correspond to mutations in the human gene PARK2 (***parkin2***)				
sequences that cause Parkinson's disease. The application claims use of polynucleotide and protein sequences for diagnosis. The application also claims the construction of a transgenic non-human animal containing a mutated				

sequences that cause Parkinson's disease. The application claims use of polynucleotide and protein sequences for diagnosis. The application also claims the construction of a transgenic non-human animal containing a mutated

DNA sequence and therefore expressing no or a less active or non-active parkin protein. The patent application further claims use of transgenic animals as a model for neurodegenerative diseases. The transgenic animals can be used for screening therapeutic agents, evaluating treatments, and examg disease pathol., and bred for other studies.
RE CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s park2
L4 54 PARK2

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5 32 DUP REM L4 (22 DUPLICATES REMOVED)

=> s l5 and (transgen? or knockout or knock out or delet? or deficient?)
L6 13 L5 AND (TRANSGEN? OR KNOCKOUT OR KNOCK OUT OR DELET? OR DEFICIE N?)

=> s bib abs 1-
YOU HAVE REQUESTED DATA FROM 13 ANSWERS.
CONTINUE? Y/(N) y

L6 ANSWER 1 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC
AN 2002 389444 BIOSIS
DN PREV200200389444
TI Molecular findings in familial Parkinson disease in Spain.
AU Hoenicka, Janet (1), Vidal, Lidice, Morales, Blas, Ampuero, Israel,
Jimenez-Jimenez, F. Javier, Berciano, Jose, del Ser, Teodoro, Jimenez,
Adriano, Ruiz, Pedro G. de Yebenes, Justo G.
CS (1) Banco de Tejidos para Investigaciones Neurológicas Facultad de Medicina, Universidad Complutense de Madrid, Avda Complutense s/n,
Pabellón III, Sotano, Madrid, 28040 jhoenicka@cbm.uam.es Spain
SO Archives of Neurology, (June, 2002) Vol. 59, No. 6, pp. 966-970
http://www.archneurol.com print
ISSN 0003-9942
DT Article
LA English
AB Background: Several genetic errors in alpha-synuclein (Park1) and ubiquitin carboxyl-terminal-hydrolase L1(Park5) genes cause autosomal dominant familial Parkinson disease. Mutations in the parkin gene (***Park2***) are the major cause of autosomal recessive Parkinson disease. Objective: To analyze the clinical and molecular data of 19 Spanish kindreds (13 with recessive, 4 with dominant, and 2 with uncertain inheritance) who have familial Parkinson disease. Methods: We searched for the previously described mutations in Park1 and Park5 genes and for new or described mutations in ***Park2***. We used single-strand conformation polymorphism, direct sequencing, and restriction digestion of polymerase chain reaction (PCR)-amplified genomic DNA for this study. Results: None of these families have either Park1 or Park5 mutations. We found 5 different mutations in ***Park2*** gene in 5 of the families with recessive inheritance. To our knowledge, 2 of these mutations, V56E and C212Y, have not been previously reported. The other mutations found (***deletion*** of exons 3 and 5 and 225delA) have been described in other ethnic groups. Heterozygous carriers of a single ***Park2*** mutation either were asymptomatic or developed clinical symptoms in late adulthood or after brief exposure to haloperidol therapy. Conclusions: Mutations in ***Park2*** gene account for 38% of the families with

recessive parkinsonism in Spain. We found 2 cases of simple heterozygous ***Park2*** mutation carriers that developed clinical symptoms either in late adulthood or after brief exposure to parkinsonizing agents. Thus, hereditary Parkinson disease has more variable clinical phenotype and molecular defects than previously thought since heterozygous mutations could be a risk factor for parkinsonism.

L6 ANSWER 2 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC
AN 2000 495715 BIOSIS
DN PREV200000495836
TI Autosomal recessive early-onset parkinsonism with diurnal fluctuation.
Clinical pathologic characteristics and molecular genetic identification.
AU Yamamura, Yasuhiro (1), Hattori, Nobutaka, Matsumine, Hiroto, Kuzuhara, Shigeki, Mizuno, Yoshikuni
CS (1) Institute of Health Sciences, Hiroshima University School of Medicine, Kasumi 1-2-3, Minami-ku, Hiroshima Japan.
SO Brain & Development, (September, 2000) Vol. 22, No. Supplement 1, pp. S87-S91 print
ISSN 0387-7604
DT Article
LA English
SL English
AB Autosomal recessive early-onset parkinsonism with diurnal fluctuation (AR-EPDF, syn. autosomal recessive juvenile parkinsonism, ***PARK2***) is one of the hereditary parkinsonian syndromes. We examined subjects consisting of 43 patients from 22 families with AR-EPDF. The clinical features were relatively homogeneous, including the average age at onset of 26.1 years, beginning with dystonic gait disturbance, diurnal fluctuation of the symptoms (sleep benefit) unrelated to medication, dystonia (mainly foot dystonia), hyperactive tendon reflex, remarkable effect of levodopa and other antiparkinsonism drugs, susceptibility to dopa-induced dyskinesia, mild autonomic symptoms, absence of dementia, and slow progression of disease. Some patients had hysteric character or psychic symptoms provoked by medication. Pathologic study revealed neuronal loss in the substantia nigra pars compacta and locus coeruleus without Lewy body formation. We performed extensive molecular genetic analysis of the parkin gene in 16 families to identify a total of six different ***deletional*** mutations. In AR-EPDF loss of newly discovered 'Parkin' protein is responsible for selective degeneration of the pigmented neurons in the substantia nigra and locus coeruleus. Compared with autosomal dominant Parkinson's disease, AR-EPDF appears to be more prevalent and present in several ethnic groups.

L6 ANSWER 3 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC
AN 2000 362925 BIOSIS
DN PREV200000362925
TI Parkin ***deletions*** in a family with adult-onset, tremor-dominant parkinsonism: Expanding the phenotype
AU Klein, Christine, Pramstaller, Peter P., Kis, Bernhard, Page, Curtis C., Kann, Martin, Leung, Joanne, Woodward, Heather, Castellani, Claudio C., Scherer, Monika, Vieregge, Peter, Breakefield, Xandra O., Kramer, Patricia L., Ozelius, Laurie J. (1)
CS (1) Molecular Genetics, AECOM, 1300 Morris Park Avenue, Bronx, NY, 10461 USA
SO Annals of Neurology, (July, 2000) Vol. 48, No. 1, pp. 65-71 print
ISSN 0364-5134
DT Article
LA English
SL English

AB A gene for autosomal recessive parkinsonism, ***PARK2*** (parkin), has recently been identified on chromosome 6q and shown to be mutated in Japanese and European families, mostly with early onset parkinsonism. Here we present a large pedigree from South Tyrol (a region of northern Italy) with adult-onset, clinically typical tremor-dominant parkinsonism of apparently autosomal dominant inheritance. Haplotype analysis excluded linkage to the chromosome 2p, 4p, and 4q regions that harbor genes associated with autosomal dominant parkinsonism, but implicated the parkin locus on chromosome 6q. Compound heterozygous ***deletions*** in the parkin gene (one large and one truncating) were identified in 4 affected male siblings. The patients were clinically indistinguishable from most patients with idiopathic Parkinson's disease. None of them displayed any of the clinical hallmarks described in patients with previously reported parkin mutations, including diurnal fluctuations, benefit from sleep, foot dystonia, hyperreflexia, and early susceptibility to levodopa-induced dyskinesias. Two affected female individuals carried one (truncating) of the two ***deletions*** in a heterozygous state with an apparently normal allele. We conclude that the phenotypic spectrum associated with mutations in the parkin gene is broader than previously reported, suggesting that this gene may be important in the etiology of the more frequent late-onset typical Parkinson's disease.

L6 ANSWER 4 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1999 227164 BIOSIS

DN PREV199900227164

TI A wide variety of mutations in the parkin gene are responsible for

autosomal recessive parkinsonism in Europe.

AU Abbas, Nacer, Lucking, Christoph B.; Ricard, Sylvain; Durr, Alexandra;

Bonifati, Vincenzo, De Michele, Giuseppe, Bouley, Sandrine, Vaughan, Jenny

R, Gasser, Thomas, Marconi, Roberto, Broussolle, Emmanuel, Brefel-Courbon, Christine, Harhangi, Biswadjet S., Oostra, Ben A.

Fabrizio, Editio Bohme, Georg A., Pradier, Laurent, Wood, Nick W., Filla,

Alessandro, Meco, Giuseppe, Deneffe, Patrice, Agid, Yves, Brice, Alexis

(1); French Parkinson's Disease Genetics Study Group, European Consortium

on Genetic Susceptibility in Parkinson's Disease

CS (1) INSERM U289, Hopital de la Salpetriere, 47 Boulevard de l'Hopital,

75651, Paris Cedex 13 France

SO Human Molecular Genetics (April, 1999) Vol 8, No 4, pp 567-574

ISSN: 0964-6906

DT Article

LA English

SL English

AB Autosomal recessive juvenile parkinsonism (AR-JP,

PARK2, OMIM

602544), one of the monogenic forms of Parkinson's disease (PD), was

initially described in Japan. It is characterized by early onset (before

age 40), marked response to levodopa treatment and levodopa-induced

dyskinesias. The gene responsible for AR-JP was recently identified and

designated parkin. We have analysed the 12 coding exons of the parkin gene

in 35 mostly European families with early onset autosomal recessive

parkinsonism. In one family, a homozygous ***deletion*** of exon 4

could be demonstrated. By direct sequencing of the exons in the index

patients of the remaining 34 families, eight previously

undescribed point mutations (homozygous or heterozygous) were detected in eight

families

that included 20 patients. The mutations segregated with the disease in

the families and were not detected on 110-166 control chromosomes. Four

mutations caused truncation of the parkin protein. Three were frameshifts

(202-203delAG, 255delA and 321-322insGT) and one a nonsense mutation

(Trp453Stop). The other four were missense mutations (Lys161Asn,

Arg256Cys, Arg275Trp and Thr415Asn) that probably affect amino acids that

are important for the function of the parkin protein, since they result in

the same phenotype as truncating mutations or homozygous exon

deletions. Mean age at onset was 38 + 12 years, but onset up to

age 58 was observed. Mutations in the parkin gene are therefore not

invariably associated with early onset parkinsonism. In many patients, the

phenotype is indistinguishable from that of idiopathic PD. This study has

shown that a wide variety of different mutations in the parkin gene are a

common cause of autosomal recessive parkinsonism in Europe and that

different types of point mutations seem to be more frequently responsible

for the disease phenotype than are ***deletions***.

L6 ANSWER 5 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1999 196872 BIOSIS

DN PREV199900196872

TI Chromosome 6-linked autosomal recessive early-onset Parkinsonism. Linkage

in European and Algerian families, extension of the clinical spectrum, and

evidence of a small homozygous ***deletion*** in one family

AU Tassin, Johann, Durr, Alexandra, de Broucker, Thomas, Abbas, Nacer,

Bonifati, Vincenzo, De Michele, Giuseppe, Bonnet, Anne-Marie, Broussolle,

Emmanuel, Pollak, Pierre, Vidailhet, Marie, De Mari, Michele, Marconi,

Roberto, Medjbeur, Soraya, Filla, Alessandro, Meco, Giuseppe, Agid, Yves,

Brice, Alexis (1); The French Parkinson's Disease Genetics Study Group;

The European Consortium on Genetic Susceptibility in Parkinson's Disease

CS (1) INSERM U289, Hopital de la Salpetriere, 47 bd de l'Hopital, 75651,

Paris Cedex 13 France

SO American Journal of Human Genetics, (July, 1998) Vol 63, No 1, pp

88-94

ISSN: 0002-9297

DT Article

LA English

AB The gene for autosomal recessive juvenile Parkinsonism (AR-JP) recently

has been mapped to chromosome 6q25.2-27 in Japanese families. We have

tested one Algerian and 10 European multiplex families with early-onset

Parkinson disease for linkage to this locus, with marker D6S305. Homogeneity analysis provided a conditional probability in favor

of linkage of > 9 in eight families, which were analyzed further with eight

micro-satellite markers spanning the 17-cM AR-JP region. Haplotype

reconstruction for eight families and determination of the smallest region

of homozygosity in two consanguineous families reduced the candidate

interval to 11.3 cM. If the ***deletion*** of two microsatellite markers (D6S411 and D6S155C) that colocalize on the genetic

map and that

segregate with the disease in the Algerian family is taken into account,

the candidate region would be reduced to <1 cM. These findings should

facilitate identification of the corresponding gene. We have confirmed

linkage of AR-JP, in European families and in an Algerian family to the

PARK2 locus. ***PARK2*** appears to be an important locus for

AR-JP in European patients. The clinical spectrum of the disease in our families, with age at onset (mean 58 years) and the presence of painful dystonia in some patients, is broader than that reported previously.

L6 ANSWER 6 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC

AN 1998 228246 BIOSIS

DN PREV199800228246

T1 A microdeletion of D6S305 in a family of autosomal recessive juvenile

parkinsonism (***PARK2***

AU Matsumine, Hiroto (1), Yamamura, Yasuhiro, Hattori Nobutaka, Kobayashi,

Tomonori, Kitada, Tohru, Yoritaka, Asako, Mizuno, Yoshikuni

CS (1) Dep. Neurol., Juntendo Univ. Sch. Med., 2-1-1 Hongo Bunkyo, Tokyo 113

Japan

SO Genomics, (April 1, 1998) Vol. 49, No. 1, pp. 143-146

ISSN 0888-7543

DT Article

LA English

AB A gene for autosomal recessive juvenile parkinsonism (ARJP,

HGMW-approved

symbol ***PARK2***; MIM 600116) has recently been mapped to a 17-cM

interval on chromosome 6q25.2-q27. We here report an inbred family with

ARJP showing a perfect cosegregation with null allele for D6S305, which is

a marker within the ARJP locus. We assigned the ***deletion*** within

an interval between D6S1937 and AFMa155td9, which are 0 cM apart from each

other and located on a single YAC clone. Two possibilities should be

evaluated: (1) the ***deletion*** is polymorphic and linked to ARJP,

and (2) the ***deletion*** is pathogenic and contains both D6S305 and

the ARJP gene (or a part of it). An exon search in a ***deleted***

segment or in the relatively small-sized genomic clones harboring D6S305

may enormously facilitate the cloning procedure of the ARJP gene.

L6 ANSWER 7 OF 13 EMBASE COPYRIGHT 2003 ELSEVIER SCI B V

AN 2002034266 EMBASE

T1 Genetic risk factors: Session V summary and research needs

AU Farrer M., Richfield E.

CS M. Farrer, Department of Neuroscience, Center for Neuroscience, Mayo

Clinic, Jacksonville, FL 32224, United States

farrer.matthew@mayo.edu

SO NeuroToxicology, (2001) 22/6 (845-848)

Refs. 23

ISSN 0161-813X CODEN NRTXDN

PUI S 0161-813X(01)00087-0

CY Netherlands

DT Journal; Conference Article

FS 008 Neurology and Neurosurgery

022 Human Genetics

037 Drug Literature Index

LA English

SL English

AB The interaction between genetic predisposition, environmental exposure,

and age are well recognized in contributing to human Parkinsonism.

However, the relative importance of each of those factors in any given

case is difficult to ascertain. This session was devoted toward identifying and exploring genetic risk factors in contributing to

human

Parkinsonism. Clues arising from cases with familial

Parkinsonism are

proving useful in identifying the biochemical pathways perturbed in

idiopathic Parkinson's disease. Genetic risk factors are identified in

families through a variety of methods. Once a specific gene is identified,

a variety of tools can be used to understand the role of a particular

mutation or possible roles for the wild-type form of the protein in contributing to human Parkinsonism. This session had three

presentations:

the first presentation dealt with identifying genes in human Parkinson's

disease and exploring their functional effects. The second presentation

examined the use of ***transgenic*** mouse models for understanding

the role of gene products in developing Parkinson's disease and how those

models may be used for the development of new treatments. The final talk

examined the role of mitochondrial abnormalities leading to electron

transport deficits in Parkinson's disease and how genes and the environment may interact. The final talk also examined potential

interventions that may help alleviate functional deficits related to mitochondrial impairments. Role of Genes in Parkinson's

Disease Dr

Matthew Farrer detailed the search for familial mutations that contribute

to Parkinsonism. He opened his presentation by highlighting the difficulty

in proving a role for environmental exposures in disposing of idiopathic

Parkinson's disease. To date, rural living, well water consumption,

smoking and caffeine intake most reliably have an effect on risk. However,

in many studies the effects are small and confidence intervals may overlap

10. Thus, despite intensive epidemiological study the field has been left

with little direction. That is, until now, Farrer highlighted the rapid pace of identification of genetic mutations contributing to different

types of Parkinsonism. Currently, at least eight genetic loci (Park

1

through Park 8) are known (see Farrer et al., 1999a, b,

Polymeropoulos,

1997, Kitada, 1998, Periquet et al., 2001, Gasser, 1998, Leroy, 1998a, b,

Hutton, 1998, Kruger, 1998, Spillantini et al., 1998,

Sveinbjornsdottir,

2000, Van Duijn et al., 2001, Valente et al., 2001, Masliah et al., 2001,

Hsu et al., 2000, Takeda et al., 2000, Haas et al., 2001, Shults et al.,

1995, 1997, 1998, 1999, Haas et al., 1995). Park 1, is an autosomal

dominant locus at 4q21 originally described in the Contursi kindred, in

1997, affected individuals were shown to harbor an A1a53Thr mutation in

the alpha-synuclein gene. In 1998, an A1a30Pro alpha-synuclein

mutation was subsequently found in a family of German origin. Many other

talks during this meeting focused on the mechanism of action and roles for

alpha-synuclein in contributing to idiopathic Parkinson's disease.

Recessively inherited juvenile and early onset Parkinsonism may be due to

Park 2 mutations. The gene affected is located at the tip of chromosome

6q25.2-q27 and encodes Parkin, a novel E3 protein ligase. Less emphasis

was placed on Parkin mutations at this meeting, although their role in

both juvenile Parkinsonism without Lewy body pathology and now later-onset

seemingly sporadic disease is becoming better understood. Mutations

probably account for around 50% of familial, recessive Parkinsonism with

onset <45 years and 18% of seemingly sporadic cases. Parks 3 and 4 have

been mapped in rare families with dominant inheritance patterns, albeit

with reduced penetrance for disease. Park 3 has onset typical for sporadic

Parkinson's disease, and is located at 2p13. Park 4 implicates a genetic

mutation in early onset Parkinsonism-dementia on chromosome 4p15. For Park

5, located at 4p14, the inheritance pattern is unclear although both

Uchl1Met and Met124Leu ubiquitin carboxyterminal hydrolyze (UCHL1)

mutations have been implicated in familial disease and a Ser18Tyr

polymorphism is inversely associated with risk for sporadic disease. Parks

6 and 7 are recessive and located at 1p35-p36 and 1p36, respectively. Both

regions were mapped in consanguineous kindreds with relatively early onset.

Parkinson's disease and Park 6 like Park 2 may account for disease in multiple families. Chromosome 1p32 has been recently mapped in the Icelandic population to late-onset Parkinson's disease and has tentatively been assigned as Park 8. Dr. Farrer went on to present data outlining the mechanism of action for some of these proteins implicated by genetic studies and how the mutations may predispose to Parkinson's disease. He emphasized the need and importance of further functional studies, presently in their infancy, to elucidate common pathways likely to be perturbed in both familial and sporadic Parkinson's disease. Cellular and animal models, now possible to create, are providing a new generation of research tools. Only on this background can hypotheses about the effects of common environmental agents be tested. Molecular knowledge and models will facilitate the development of novel interventions and rational drug design. By way of analogy, Farrer alluded to the tremendous success this approach has made in Alzheimer's disease. Dr. Farrer presented a web-site address for his work where investigators may obtain these new genetic research tools. Cloned wild-type and mutant genes that cause familial Parkinsonism can be ordered directly from the web-site. There are no restrictions on use and they are available at no cost to academic investigators. The web-site address is www.mayo.edu/fpd/_an effort presently supported by both NINDS and the Mayo Foundation. This site contains recent information about both the Mayo Clinic Jacksonville research efforts. It also contains links to other sites related to Parkinson's disease.

L6 ANSWER 8 OF 13. CAPLUS. COPYRIGHT 2003 ACS
 AN 2002.965737. CAPLUS
 TI Parkinson mutations (***Park2***)
 AU Mizuno, Yoshikuni, Hattori, Nobutaka, Yoshino, Hiroyo, Asakawa, Shuichi, Minoshima, Shinsei, Shimizu, Nobuyoshi, Suzuki, Toshiaki, Chika, Tomoki, Tanaka, Keiji
 CS Department of Neurology, Juntendo University School of Medicine, Tokyo, 113-8421, Japan
 SO Genetics of Movement Disorders (2003), 305-314. Editor(s) Pulst
 Stefan-M. Publisher: Academic Press, San Diego, Calif
 CODEN 69DIVT, ISBN 0-12-566652-7
 DT Conference
 LA English
 AB ***Park2*** (autosomal recessive juvenile parkinsonism, AR-JP) presents young-onset parkinsonism, consisting of gait disturbance, rest tremor, cogwheel rigidity, and bradykinesia. Clin. features are essentially similar to those of late-onset sporadic Parkinson's disease. They respond to levodopa well. Progression is slow. Pathol. features include extensive nigral and locus coeruleus degeneration and gliosis without Lewy body formation. The disease gene has been identified and named parkin, which is located on the long arm of chromosome 6 at 6q25-27.2. Varieties of ***deletion*** mutations and point mutations of parkin have been found in patients with ***Park2***. Also compound heterozygotes were found. Parkin protein functions as a ubiquitin ligase and a no. of candidate substrates for Parkin have been reported including CDCrel 1, alpha-synuclein 22, Pael receptor, synphilin-1, and CDCrel 2A. Accumulation of one or more of the candidate substrates appears to be the cause of nigral degeneration. ***Transgenic*** and ***knock*** animals of parkin have not been reported in the literature.

Park2 has been considered to represent the most common form of familial Parkinson's disease. (c) 2003 Academic Press
 RE CIT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 13. CAPLUS. COPYRIGHT 2003 ACS
 AN 2001.517915. CAPLUS
 DIJ 136.245209
 TI Analysis of genetic mutation in the 6q25.3 region in breast cancer
 AU Hirano, Akira, Ueda, Takahito, Nagai, Hisao, Haga, Shunsuke, Kajiwara, Tetsuro, Kasumi, Fujio, Sakamoto, Goi, Nakamura, Yusuke, Emi, Mitsuru
 CS Affiliated Second Hospital, Department of Surgery, Tokyo Women's Medical College, Arahawa-ku, Tokyo, 116-8567, Japan
 SO Nyugan Kiso Kenkyu (2001), 10: 27-30
 CODEN NKKEFA, ISSN 1343-2028
 PB Nyugan Kiso Kenkyukai
 DT Journal
 LA Japanese
 AB Chromosomal ***deletion*** in breast cancer is analyzed by loss of heterozygosity. Loss of heterozygosity anal. reveals the commonly ***deleted*** region on chromosome 6 in breast cancer and detailed ***deletion*** mapping of chromosome 6 identifies 34 exons within the region. One of the exons perfectly matches with the exon 9 of the ***PARK2*** gene for parkinsonism, indicating the presence of the ***PARK2*** gene at chromosome 6q25.3. These results demonstrate the possible role of the ***PARK2*** gene as a tumor suppressor gene in breast cancer.

L6 ANSWER 10 OF 13. CAPLUS. COPYRIGHT 2003 ACS
 AN 2001.487635. CAPLUS
 DIJ 136.83991
 TI Parkin gene causing benign autosomal recessive juvenile parkinsonism
 AU Hsipeanu, P., Inzelberg, R., Mouch, S., Abo, Carasso, R. L., Elumen, S. C., Zhang, J., Matsumine, H., Hattori, N., Mizuno, Y.
 CS Department of Neurology, Hillel Yaffe Medical Center, Hadera 38100, Israel
 SO Neurology (2001), 56(11), 1573-1575
 CODEN NEURAI, ISSN 0028-3878
 PB Lippincott Williams & Wilkins
 DT Journal
 LA English
 AB Autosomal recessive juvenile parkinsonism (AR-JP) is an early-onset parkinsonism caused by exonic ***deletions*** or point mutations in the parkin gene. The relationship between the type of the genetic defect and the clin. presentation, the response to therapy, and the evolution have not been yet detd. The authors describe a single-basepair ***deletion*** at nucleotide 202 in exon 2 of the parkin gene in a kindred with a benign clin. course.
 RE CIT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 13. CAPLUS. COPYRIGHT 2003 ACS
 AN 2001.382045. CAPLUS
 DIJ 136.113296
 TI Autosomal recessive juvenile parkinsonism (AR-JP). Genetic diagnosis
 AU Matsumine, Hiroto, Hattori, Nobutaka, Mizuno, Yoshikuni
 CS Department of Neurology, Juntendo University School of Medicine, Tokyo, Japan
 SO Methods in Molecular Medicine (2001), 62(Parkinson's Disease), 13-29
 CODEN MMMEFN
 PB Humana Press Inc
 DT Journal
 LA English
 AB The autosomal recessive juvenile parkinsonism (AR-JP) is linked to the 17-cM region on chromosome 6q25.2-27, and the locus is designated

Park2 Parkin is the responsible gene for the disease. Abnormalities in this gene, which are specific for AR-JP, include homozygous exonic ***deletions***, small ***deletions***, and point mutations. The presence of homozygous exonic ***deletions*** supports the notion that nigral neurodegeneration in AR-JP is caused by loss of function of the parkin protein. The anal. of mutations in the parkin gene is also presented.

RE CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2003 ACS
 AN 2001.167694 CAPLUS
 DN 134.203465

TI Mouse park n2 cDNA and protein sequences for a ***transgenic*** animal model of Parkinson's and neurodegenerative diseases
 IN Lubbert, Hermann
 PA Biofrontera Pharmaceuticals GmbH, Germany
 SO Eur Pat Appl, 62 pp
 CODEN EPXDXW
 DT Patent
 LA English
 FAN CNT 1

PATENT NO	KIND	DATE	APPLICATION NO	DATE
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PI EP 1081225	A1	20010307	EP 1999-116766	
19990830				
R AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
WO 2001016176	A2	20010308	WO 2000-EP8071	
20000818				
WO 2001016176	A3	20010927		
W CA, JP, US				
RW AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1208200	A2	20020529	EP 2000-956461	
20000818				
R AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				

PRAI EP 1999-116766 A 19990830
 WO 2000-EP8071 W 20000818

AB This patent application claims mouse gene mPark2 (parkin2) nucleotide and protein sequences with mutations or ***deletions*** which correspond to mutations in the human gene ***PARK2*** (parkin2) sequences that cause Parkinson's disease. The application claims use of polynucleotide and protein sequences for diagnosis. The application also claims the construction of a ***transgenic*** non-human animal contg a mutated DNA sequence and therefore expressing no or a less active or non-active parkin protein. The patent application further claims use of ***transgenic*** animals as a model for neurodegenerative diseases. The ***transgenic*** animals can be used for screening therapeutic agents, evaluating treatments, and examg disease pathol, and bred for other studies.

RE CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2003 ACS
 AN 2000.297432 CAPLUS
 DN 133.220862

TI Progress in the clinical and molecular genetics of familial parkinsonism
 AU Kitada, Tohru, Asakawa, Shuichi, Matsumine, Hiroto, Hattori, Nobutaka, Shimura, Hideki, Minoshima, Shinsei, Shimizu, Nobuyoshi, Mizuno, Yoshikuni
 CS Department of Neurology, Juntendo University School of Medicine, Tokyo, 113-8421, Japan
 SO Neurogenetics (2000) 2(4), 207-218
 CODEN NEROFX, ISSN 1364-6745
 PB Springer-Verlag
 DT Journal, General Review
 LA English

AB A review, with 106 refs. Parkinson's disease (PD) is a neurodegenerative disease with clin. features resulting from ***deficiency*** of dopamine in the nigrostriatal system. Most PD cases are sporadic and the primary cause of the disease is still unknown. Recently, familial PD and parkinsonism have received much attention because these forms of the disease might provide clues to the genetic risk factors involved in the pathogenesis of idiopathic PD. To date, two causative genes, alpha-synuclein and the parkin gene, have been identified. alpha-Synuclein is involved in the pathogenesis of an autosomal dominant form of PD and constitutes a major component of the Lewy body, which is a pathol. hallmark of idiopathic PD. In addn, mutations in the parkin gene have been identified as the cause of autosomal recessive juvenile parkinsonism (AR-JP). AR-JP manifests itself as a highly selective degeneration of the substantia nigra and the locus coeruleus, but without Lewy body formation. In addn, to these two genes, four chromosomal loci have been linked to other forms of familial PD. Furthermore, there are a no. of other pedigrees of familial PD in which linkage to known genetic loci has been excluded. Mol. cloning of these disease genes and elucidation of the function of their gene products will greatly contribute to the understanding of the pathogenesis of idiopathic PD.

RE CNT 106 THERE ARE 106 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 17 29 29 ON 16 JAN 2003)

FILE 'BIOSIS EMBASE, CAPLUS' ENTERED AT 17 29 41 ON 16 JAN 2003

L1 822 SPARKIN OR PARKIN2
 L2 172 SL1 AND (TRANSGEN? OR KNOCKOUT OR KNOCK OUT OR DELET? OR DEFIC
 L3 1 SPARKIN2
 L4 54 SPARK2
 L5 32 DUP REM L4 (22 DUPLICATES REMOVED)
 L6 13 SL5 AND (TRANSGEN? OR KNOCKOUT OR KNOCK OUT OR DELET? OR DEFIC

=> dup rem l2
 PROCESSING COMPLETED FOR L2
 L7 105 DUP REM L2 (67 DUPLICATES REMOVED)

=> s l2 and PY<1999
 1 FILES SEARCHED
 L8 22 L2 AND PY<1999

=> d bibabs
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L8 ANSWER 1 OF 22 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC
 AB Autosomal recessive juvenile parkinsonism (AR-JP) is a distinct clinical and genetic entity characterized by selective degeneration of nigral dopaminergic neurons and young-onset parkinsonism with remarkable response to levodopa. Recently, we mapped the gene locus for AR-JP to chromosome 6q25.2-q27 by linkage analysis and we identified a novel large gene ***Parkin***, consisting of 12 exons from this region, mutations of this gene were found to be the cause of AR-JP in two families. Now we report results of extensive molecular analysis on 34 affected individuals from 18 unrelated families with AR-JP. We found four different homozygous

intragenic ***deletional*** mutations involving exons 3 to 4, exon 3, exon 4, and exon 5 in 10 families (17 affected individuals). In addition to the exonic ***deletions*** we identified a novel one-base ***deletion*** involving exon 5 in two families (2 affected individuals). All mutations so far found were ***deletional*** types in which large exonic ***deletion*** accounted for 50% (17 of 34) and the one-base ***deletion*** accounted for 6% (2/34), in the remaining, no homozygous mutations were found in the coding regions. Our findings indicate that loss of function of the ***Parkin*** protein results in the clinical phenotype of AR-JP and that subregions between introns 2 and 5 of the ***Parkin*** gene are mutational hot spots

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(FILE 'HOME' ENTERED AT 17 29 29 ON 16 JAN 2003)

FILE 'BIOSIS EMBASE, CAPLUS' ENTERED AT 17 29 41 ON 16 JAN 2003
 L1 822 S PARKIN OR PARKIN2
 L2 172 S L1 AND (TRANSGEN? OR KNOCKOUT OR KNOCK OUT OR DELET? OR DEFIC
 L3 1 S PARKIN2
 L4 54 S PARKIN2
 L5 37 DUP REM L4 (22 DUPLICATES REMOVED)
 L6 13 S L5 A'D (TRANSGEN? OR KNOCKOUT OR KNOCK OUT OR DELET? OR DEFIC
 L7 105 DUP REM L2 (67 DUPLICATES REMOVED)
 L8 22 S L2 AND PY<1999

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 SINCE FILE TOTAL

CA SUBSCRIBER PRICE	ENTRY	SESSION	
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DATE: Thursday, January 16, 2003

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L6	l5 and (transgen\$ or knockout or knock out or knock-out or delet\$ or deficien\$)	29	L6
L5	L4 or l2	34	L5
L4	l1 near3 (gene or protein)	17	L4
L3	L2 and (transgen\$ or knockout or knock out or knock-out or delet\$ or deficien\$)	26	L3
L2	l1 and parkinson disease	29	L2
L1	Parkin or parkin2	1958	L1

END OF SEARCH HISTORY